

REMARKS

Claims 1, 4-10, 13-18, 21, 22 and 31 have been allowed. Claims 30, 39 and 40 have been objected to. Claims 23, 31 and 32 have been amended. New claims 41-42 have been added. Thus, claims 1, 4-10, 13-18 and 21-42 are pending in the application. Support for new claims 41-42 may be found in the specification at page 27, lines 18-19. Thus, no new matter has been added.

Reconsideration and withdrawal of the present rejections in view of the amendments and comments presented herein are respectfully requested.

Rejection under 35 U.S.C. §102(b)

Claims 23-26, 28, 29, 32-35, 37 and 38 were rejected as being anticipated by Adams et al. (US 2002/0012869). The Examiner alleges that Adams, which uses the same method of removing the acid catalyst, inherently teaches that the acid component is 10 ppm or less.

Claims 23 and 32 have been amended to clarify that the content of an acid component in the entire photoresist composition (after dissolving the polyhydroxystyrenic resin in the photoacid generator), is 10 ppm or less. This acid content significantly increases the storage stability of the resist solutions as shown in Table 1 of the present specification. In contrast, Adams et al. teaches removal of acid from the dissolved hydroxystyrene/styrene/t-butylacrylate resin prior to mixture with the photoacid generator (see Examples 1-3 of Adams et al.). The dissolved resin is then combined with a photoacid generator and ethyl lactate solvent (an acidic component). The ethyl lactate solvent provides a significant amount of acid component in the form of carboxyl groups, and would certainly result in an acid content of the photoresist composition of greater than 10 ppm. Thus, Adams et al. do not teach, either inherently or explicitly, photoresist compositions formed as presently claimed which have acid contents of 10 ppm or less.

Moreover, Adams et al. do not suggest methods of making photoresist compositions having the claimed acid content. In fact, Adams et al. teach the addition of acid to the dissolved resin/photoacid generator which is completely opposite to the claimed invention whose purpose is to reduce the acid content of the photoresist compositions. Thus, Adams et al. teach away from the present invention by adding an acidic component to the dissolved resin/photoacid generator.

In view of the claim amendments and comments presented above, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §102(b).

Rejection under 35 U.S.C. §103(a)

Claims 27 and 36 were rejected under 35 U.S.C. §103(a) as being unpatentable over Adams et al. (US 2002/0012869) in view of Takeda et al. (U.S. 6,593,056 B2). As discussed above, the methods recited in claims 23 and 32, which result in photoresist compositions having an acid content of 10 ppm or less, are not obvious over Adams et al. This defect in the teaching of Adams et al. is not cured by Takeda et al. who teach the equivalence of γ -butyrolactone and ethyl lactate as solvents for chemically amplified positive resist compositions. Because independent claims 23 and 32 are nonobvious over Adams et al. in view of Takeda et al, then dependent claims 27 and 36 are necessarily nonobvious.

In view of the claim amendments and comments provided above, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §103(a).

CONCLUSION

In view of the above, it is submitted that the claims are in condition for allowance. Reconsideration and withdrawal of all outstanding rejections are respectfully requested. Allowance of the claims at an early date is solicited. If any points remain that can be resolved by telephone, the Examiner is invited to contact the undersigned at the below-given telephone number.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: December 5, 2006

By: 

Neil S. Bartfeld, Ph.D.
Registration No. 39,901
Agent of Record
Customer No. 20,995
(619) 235-8550